

**REMARKS**

Claims 1-19 are all the claims pending in the application. By this Amendment, Applicant amends claims 1 and 8 to further clarify the invention. In addition, Applicant amends claim 19 for conformity therewith.

**I. Preliminary Matter**

As a preliminary matter, Applicant thanks the Examiner for returning the initialed Form PTO/SB/08 submitted with the Information Disclosure Statement filed on June 8, 2007.

**II. Summary of the Office Action**

The Examiner maintained the rejection of claims 1-19 under 35 U.S.C. § 103(a).

**III. Prior Art Rejections**

Claims 1, 2, and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,871,179 B1 to Kist et al. (hereinafter “Kist”), in view of U.S. Patent No. 6,937,984 to Morgan et al. (hereinafter “Morgan”) and claims 3-5, 16, and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kist, in view of Morgan, and further in view of U.S. Patent No. 6,510,414 to Chaves (hereinafter “Chaves”). Applicant respectfully traverses these grounds of rejections at least in view of the following exemplary comments.

Independent claim 1 recites *inter alia*: “entering the function of the instruction as a verbal input via the voice recognition system, acknowledging the verbal input of the function of the instruction via the manual input, after the acknowledging of the entered function of the instruction, correlating the entered function of the instruction with a stored set of instructions; determining format for the parameters of the entered instructions based on said correlating; and

after said acknowledging, entering the parameters of the instruction as a further verbal input via the voice recognition system.”

It is disclosed that in conventional techniques, such as office applications, input of information has been optimized in that voice entries are recognized and converted to text. However, this technique could not be successfully expanded to include iterative functions required in creating a program. An exemplary, non-limiting embodiment of the present invention, therefore, provides an improved technique for creating analog programs such as ladder diagrams. In particular, in creating analog electric circuit diagrams, a large number of control commands must be entered instead of continuous text. This requires the selection as well as the arrangement and linkage of different control elements, which is accomplished by means of successive instructions that the computer has to recognize and execute correctly. Since most of such instructions have parameters, it is not normally possible to define a complete statement within which the desired function including the parameters would then have to be found in the conventional techniques. Rather, especially in the creation of programs, variables are frequently used, which relate to the corresponding application and therefore expand the instruction vocabulary to include almost the entire language vocabulary and more. The correct understanding and the correct processing of functions, parameters, data and variable names in the creation of programs has so far presented an input-related problem in conventional techniques.

According to an exemplary, non-limiting embodiment of the present invention, however, a sequenced operation is provided, where first a command is input via voice and the user manually presses an enter button to designate end of the command. Once the command is recognized, additional information such as parameters that may be required for this command is found and the system waits for further user input of these parameters. When the parameters are

input (via voice and enter button), they are interpreted in accordance with the obtained format of the required additional information. Accordingly, the analog programs such as ladder diagrams may be created more efficiently via voice input.

It will be appreciated that the foregoing remarks relate to the invention in a general sense, the remarks are not necessarily limitative of any claims and are intended only to help the Examiner better understand the distinguishing aspects of the claims mentioned above.

The Examiner contends that Kist discloses inputting via voice function and parameters. The Examiner acknowledges that Kist does not disclose or suggest acknowledging verbal input via manual input but alleges that Morgan cures the above-identified deficient disclosure of Kist (*see* pages 3 and 4 of the Office Action). The Examiner further alleges that it would be obvious to provide “some manual input, such as conformation or acknowledgement, at some stage of user interaction with recognized speech system, as taught by Morgan, so as to interactively use spoken and/or manual input for entering command (function) and then entering corresponding parameter(s), for the purpose (motivation) of handling possible recognition errors and/or conforming the accuracy of the spoken commands” (*see* page 4 of the Office Action).

Applicant respectfully disagrees. Applicant respectfully submits that the combined disclosures of Kist and Morgan do not suggest inputting function and parameters separately, where the verbal input of the function is acknowledged via manual input. That is, claim 1 requires acknowledgment of the function prior to the parameter input and not “*some*” acknowledgement at “*some*” time as alleged by the Examiner. That is, where to place an acknowledgement is a mere speculation by the Examiner based on improper hindsight at least because the prior art made of record does not disclose or suggest acknowledgement prior to the parameter input.

In fact, Kist discloses a process to distinguish between dictation and commands. In particular, Kist discloses a method and a system for recognizing and executing a voice command that has a dictation portion. Upon receiving user input, the spoken utterance is processed to identify a pattern of words which matches a pre-determined command pattern. Then, the computer system command is identified that corresponds to the pre-determined command pattern and has at least one parameter. The parameter is extracted from a dictation portion of the spoken utterance which is separate from the pattern of words matching the command pattern. The computer system command is then processed to perform an event in accordance with the parameter. If the spoken utterance does not contain a pattern of words matching a pre-determined command pattern, then the spoken utterance is recognized as dictation and inserted at a specified location into an electronic document or other system or application software (*see* Abstract, col. 2, line 56 to col. 3, line 24; col. 7, lines 42 to 60).

Kist, however, does not disclose or even remotely suggest having the command and parameters being input separately. In Kist, the system receives user input corresponding to the spoken utterance and this input is parsed so as to obtain the command and parameters if they are present in the spoken utterance. In other words, Kist does not disclose or even remotely suggest inputting via speech the parameters and commands separately. Furthermore, Kist does not disclose or even remotely suggest, as acknowledged by the Examiner, acknowledging via manual input receipt of the command, and only after the acknowledgement, receiving the parameters. In addition, Kist does not disclose or even remotely suggest correlating the command with stored commands to determine the format for the parameters.

The Examiner contends that Morgan cures the deficient disclosure of Kist. Morgan, however, clearly teaches away from having manual confirmations. Specifically, Morgan states in col. 2, lines 16 to 36:

Many of the deficiencies in speech recognition, both in word processing and in command technologies, are due to inherent voice recognition errors due in part to the status of the technology and in part to the variability of user speech patterns and the user's ability to remember the specific commands necessary to initiate actions. As a result, most current voice recognition systems provide some form of visual feedback which permits the user to confirm that the computer understands his speech utterances. In word processing, such visual feedback is inherent in this process since the purpose of the process is to translate from the spoken to the visual. That may be one of the reasons that the word processing applications of speech recognition have progressed at a faster pace. In any event, in all voice recognition systems with visual feedback, at some stage, the interactive user is required to make some manual input, e.g. through a mouse or a keyboard. The need for such manual operations still gets in the way of interactive users who, because of a lack of computer skills or other reasons, wish to relate to the computer system in a fully voice activated or conversational manner...(emphasis added).

In other words, one of the problems, Morgan's invention attempts to resolve is requiring manual input via mouse or keyboard. In fact, Morgan states that "[m]annual I/O devices, such as the keyboard and the mouse, are shown primarily because they may be used for ancillary I/O functions not related to the present invention, which uses primarily spoken commands" (col. 4, lines 5 to 8). In short, as is clear, Morgan fails to cure the deficient disclosure of Kist. Morgan does not disclose or even remotely suggest inputting via speech the parameters and commands separately. Furthermore, Morgan does not disclose or even remotely suggest acknowledging via manual input receipt of function, and only after the acknowledgement, receiving the parameters.

In other words, if one of ordinary skill in the art would have combined Kist with Morgan, then there would be no manual input as Morgan clearly discloses it as undesirable.

Furthermore, even if Morgan discloses that in conventional techniques, some form of manual input at some stage is provided, it does not disclose or suggest that the confirmation is to be provided between the command and parameters. On the contrary, it would appear that the manual input would be made after entire entry *i.e.*, since Kist clearly discloses inputting text and commands together and using manual input to confirm some word in the entire entry.

Similarly, Chaves relates to character recognition system and does not cure the above-identified deficiencies of these other references.

In addition, Applicant respectfully submits that the prior art of record fails to disclose or suggest correlating the entered function to obtain format for the parameters that are input separately.

Therefore, “entering the function of the instruction as a verbal input via the voice recognition system, acknowledging the verbal input of the function of the instruction via the manual input, after the acknowledging of the entered function of the instruction, correlating the entered function of the instruction with a stored set of instructions; determining format for the parameters of the entered instructions based on said correlating; and after said acknowledging, entering the parameters of the instruction as a further verbal input via the voice recognition system,” as set forth in claim 1 is not disclosed by the combined disclosures of Kist and Morgan, which lack inputting via speech the parameters and commands separately and inputting parameters for the functions after manual input of an acknowledgement of the command, and correlating the function to determine format for the parameters that are input separately. For at least these exemplary reasons, claim 1 is patentable over Kist in view of Morgan. Accordingly,

Applicant respectfully requests the Examiner to withdraw this rejection of claim 1 and its dependent claims 2-5, 16, and 19.

Next, independent claim 8 recites features similar to, although not necessarily coextensive with, the features argued above with respect to claim 1. Therefore, arguments presented with respect to claim 1 are respectfully submitted to apply with equal force here. For at least substantially analogous exemplary reasons, therefore, independent claim 8 is patentable over Kist in view of Morgan.

Claims 6, 7, 9-11 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kist, in view of Morgan, and further in view of U.S. Patent Publication No. 2002/0055844 A1 to L'Esperance (hereinafter "L'Esperance"), claims 12-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kist, in view of Morgan and L'Esperance, and further in view of U.S. Patent Publication No. 2002/0123893 A1 to Woodward (hereinafter "Woodward"), claims 17 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kist, in view of Morgan, and further in view of U.S. Patent No. 7,099,809 B2 to Dori (hereinafter "Dori"). Applicant respectfully traverses these grounds of rejections at least in view of the following exemplary comments.

Claims 6, 7, 9-15, 17, and 18 depend on claim 1 or 8. Applicant has already demonstrated that Kist and Morgan do not disclose all the features of independent claims 1 and 8. L'Esperance, Woodward, and Dori do not compensate for the above-identified deficiencies of Kist and Morgan. Together, the combined teachings of these references would not have (and could not have) led the artisan of ordinary skill to have achieved the subject matter of claims 1 and 8. Since claims 6, 7, 9-15, 17, and 18 depend on claims 1 and 8, they are patentable at least by virtue of their dependency.

In addition, dependent claim 17 recites: “wherein the function of the instruction is a command for creating or editing a portion of an electric analog circuit diagram.” The Examiner acknowledges that Kist and Morgan do not disclose or suggest the unique features of claim 17 but allege that Dori cures the above-identified deficiencies of Kist and Morgan (*see* page 13 of the Office Action). Applicant respectfully disagrees. Applicant respectfully submits that Dori relates to creating a graphical model of a textual descriptions and vice versa (*see* Abstract and col. 1, line 38 to col. 2, line 40). However, Dori is unrelated to creating or editing a portion in an electric analog circuit diagram. That is, Dori does not disclose or suggest creating an automation program *i.e.*, the electric analog circuit diagram. In short, Dori does not cure the above-identified deficiencies of Kist and Morgan. For at least these additional exemplary reasons, claim 17 is patentable over the prior art of record.

Dependent claim 18 recites “wherein the function of the instruction is a command for creating or editing a ladder diagram.” The Examiner acknowledges that Kist and Morgan do not disclose or suggest the unique features of claim 17 but allege that Dori cures the above-identified deficiencies of Kist and Morgan (*see* page 13 of the Office Action). Applicant respectfully disagrees. Applicant respectfully submits that Dori discloses C++ programming language but there is no disclosure or suggestion of a ladder diagram. That is, Dori is unrelated to automation systems and as such does not disclose or suggest programs that are needed for creating these systems such as the ladder diagram. In short, Dori does not cure the above-identified deficiencies of Kist and Morgan. For at least these additional exemplary reasons, claim 18 is patentable over the prior art of record.



IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. **If any points remain in issue, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.**

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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